unitech

HT680 Rugged Handheld Terminal

- HT680 -

User's Manual

400737G Version 1.2

Preface

About This Manual

This manual explains how to install, operate and maintain the HT680 Rugged Enterprise Terminal.

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Regulatory Compliance Statements

FCC Warning Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

1. This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
2. This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. To maintain compliance with FCC RF exposure compliance requirements, avoid direct contact to the transmitting antenna during transmitting.
3. Any changes or modifications (including the antennas) made to this device that are not expressly approved by the manufacturer may void the user's authority to operate the equipment.

FCC Label Statement

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

Canadian Compliance Statement

This Class B Digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numerique de la classe B respecte les exigences du Reglement sur le material broilleur du Canada.

European Conformity Statement

Declaration of Conformity with Regard to the R&TTE 1999/5/EC and EMC 89/336/ EEC directives.

RoHS Statement

This device conforms to RoHS (Reduction Of Hazardous Sub-stances) European Union regulations that set maximum concentration limits on hazardous materials used in electrical and electronic equipment.

Taiwan NCC Warning Statement

交通部電信總局低功率電波輻射性電機管理辦法 (930322)

根據交通部低功率管理辦法規定：

第十二條　經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。

第十四條　低功率射頻電機之使用不得影響飛航安全及幹擾合法通信；經發現有幹擾現象時，應立即停用，並改善至無幹擾時方得繼續使用。前項合法通信，指依電信法規定作業之無線電通信。

低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之幹擾。

SAR標準值2.0W/Kg；送測產品爲0.268W/Kg

爲減少電磁波，請妥適使用

RF Radiation Exposure Statement:

For body worn operation, this phone has been tested and meets FCC RF exposure guidelines when used with an accessory that contains no metal and that positions the handset a minimum of 1.5 cm from the body. Use of other accessories may not ensure compliance with FCC RF exposure guidelines.

Laser Information

The Unitech HT680 series is certified in the U.S. to conform to the requirements of DHHS/CDRH 21CFR Subchapter J and to the requirements of IEC 825-1. Class II and Class 2 products are not considered to be hazardous. The HT680 series contains internally a Visible Laser Diode (VLD) whose emissions do not exceed the maximum limits as set forth in the above regulations. The scanner is designed so that there is no human access to harmful laser light during normal operation, user maintenance or during prescribed service operations.

The laser safety warning label required by the DHHS/IEC for the HT680 series' optional laser scanner module is located on the memory compartment cover, on the back of the unit.

CAUTION! Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous laser light. Use of optical instruments with the scanner will increase eye hazard. Optical instruments include binoculars, microscopes, and magnifying glasses. This does not include eyeglasses worn by the user.

Battery Notices

The HT680 is equipped with a Lithium-Ion battery pack and backup battery. Both batteries will discharge after an extended period of not being used.

When both batteries are discharged, recharge the unit for 16 hours in order to fully charge the main battery and backup battery. Recharge the HT680 through the following:

1. Plug the USB charging cable to the HT680 and plug the 5V/3A AC-DC adapter to the power jack of the USB charging cable.
2. Place the HT680 into the docking station and plug the 5V/3A AC-DC adapter to the power jack of the docking station.

If the main battery is removed, the backup battery ensures the data on SDRAM is safe for up to 6 hours. To prevent data loss, do not leave the HT680 uncharged with the main battery removed for an extended period. See *First Time to Charge the Main Battery & Backup Battery* on page 9 for more details.

Note: Rechargeable batteries are advised to replace every year or when 500 charge/discharge cycles achieved to guarantee optimal performance. It is normal that the battery balloons or expands beyond one year or the maximum of 500 cycles. Although it does not cause harm, it cannot be used again and must be disposed of according to the location's safe battery disposal procedures.

If the performance decrease is greater than 20% in a Lithium-Ion battery, the battery is at the end of its life cycle. Do not continue to use, and ensure the battery is disposed of properly.

The length of time that a battery power lasts depends on the battery type and how the device is used. Conserve the battery life through the following:

- Avoid frequent full discharges because this places additional strain on the battery. Several partial discharges with frequent recharges are better than a deep one. Recharging a partially charged lithium-Ion battery does not cause harm because there is no memory.
- Keep the lithium-Ion battery cool. Avoid a hot car. For prolonged storage, keep the battery at a 40% charge level.
- Do not leave the lithium-Ion battery discharged and unused for an extended period because the battery will wear out and the longevity of the battery will be at least shorter than half of the one with frequent recharges.

Battery charge notice

It is important to consider the environment temperature whenever the Lithium-Ion battery pack is charged. Charging is most efficient at normal room temperature or in a slightly cooler environment. It is essential that batteries are charged within the stated range of 10°C to 45°C. Charging batteries outside of the specified range could damage the batteries and shorten their charging life cycle.

CAUTION! Do not charge batteries at a temperature lower than 0°C, which will increase the internal resistance to cause heat and make the batteries unstable and unsafe. Please use a battery temperature detecting device for a charger to ensure a safe charging temperature range. Further, to protect and avoid battery from

inflating, the battery is detected for thermal protection and will not be charged when the temperature of battery is over 50 degrees.

Storage and safety notice

Although charged Lithium-Ion batteries may be left unused for several months, their capacity may be depleted due to build up of internal resistance. If this happens they will require recharging prior to use. Lithium-Ion batteries may be stored at temperatures between -20°C to 60°C, however they may deplete more rapidly at the higher temperature ranges. It is recommended to store batteries within normal room temperature ranges.

Warranty

The following items covered under Unitech Limited Warranty are free from defects during normal use:

- HT680 – 1-year limited warranty.
- Lithium-Ion battery – 6-month limited warranty.

Warranty becomes void if equipment is modified, improperly installed or used, dam-aged by accident or neglect, or if any parts are improperly installed or replaced by the user.

Use only the adapter supplied. Using the wrong adapter may damage the unit and will void the warranty.

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Chapter 1

Getting Started

Introducing the HT680

The HT680 is a rugged, compact and ergonomic handheld terminal powered by the WinCE. NET OS to enhance your work more efficient and profitable. It incorporates an integral barcode scanning 1D laser/ 2D imager device, color LCD with touch screen, keypad, BT and wireless communication interface capability. It provides the user with a standard Windows-based environment for customization and operation.

The following HT680 Product Reference Guide provides simple step-by-step procedures to give you hands-on experience with your HT680. For programming your HT680, please refer to our SKD and programming manual.

Notice

1. This unit is equipped with a battery pack and backup battery. It is possible that the Unitech HT680 may not be powered ON due to battery discharge as a result of storage. In the above situation and the first-time use, plug the HT680 to the charging cable or charging cradle (with 5V/2A AC-DC adapter), and charge the unused unit for over 16 hours in order to fully charge its backup battery as well.
2. Under normal condition, the back-up battery will be charged from external power or the main battery (if the main battery still has enough power to turn on). If it is charged for the first time, the back-up battery will be fully charged while main battery is charged fully.

Warranty

Unitech's Limited Warranty provides for different warranty periods for different parts and accessories:

- Terminal is covered by one-year limit warranty.
- Docking Station is covered by one-year limit warranty.
- Cable is covered by one-year limit warranty.
- Battery is covered by three-month warranty.

Regulatory

Compliance with VCCI, CE, FCC, BSMI, UL, CCC

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HT680 Model Specification

Rugged/Environment	Drop	1.5M
	IP Rating	IP 54
	Operation Temp.	-10°C to 50°C
	Storage Temp.	-20°C to 70°C (W/O Battery)
	Humidity	5%~95% non-condensing
	ESD	Contact ± 8KV, Air ± 12KV
Keypads	Full Alphanumeric	12 keys
Physical	Weight (g)	280g ± 10g (W/O Battery)
	Dimension (LxWxH mm)	169 x 55 x 30
Power supply & Management	Main Battery Type	3.7V / 2200mAH Li-ion, 8.14WH
	Battery Recharging Time	Under 4 hrs.
	Battery Life	BT → Up to 12 hours WLAN → around 8 hours GPRS → 6hours
	Backup Battery Type	70mAH Li-polymer
Display	2.7" Color TFT LCD with Touch Panel	v
	Display pixels	240x320 pixel
Docking Station	USB/Ethernet, Four-Bay Multi. Charger	
Barcode Scanner Reader	1D Laser & 2D Imager	
System Architecture	CPU Processor	PXA270 - 520MHz
	Operating System	WinCE 5.0 Pro.
	Flash ROM	512MB
	SDRAM	128MB
Speaker	v	
Communication Interface	USB Client / USB Host	
Expansion Memory Slot	miniSD Slot	v
Radio Options	802.11b/g / GPRS / GPRS EDGE	v
	Bluetooth	v

Remark: V= Contain ; X= Not Contain

HT680 Accessories

Each of the following items is sold separately to enhance your HT680 terminal's capabilities.

Communication and Charging Cradle

USB Cradle is for data transmission and charging purpose. Modem Cradle is for data transmission via phone line and charging purpose.

Communication and Charging Cable Kits

An included USB cable or an optional serial cable connects the HT680 terminal directly to a peripheral device for communication and a power source for charging.

Universal Adaptor

This power supplier adaptor plugs the terminal directly into a switch to power the terminal and charge the battery pack. This accessory converts the 120~240 Volts for different countries use.

Holster

The holster holds the terminal for mobile use.

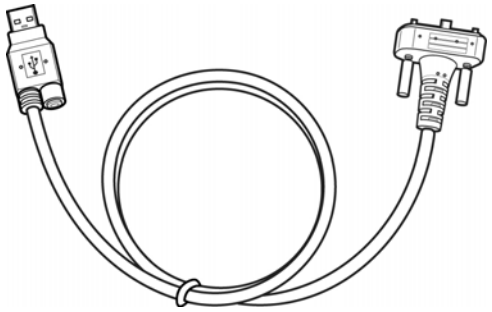
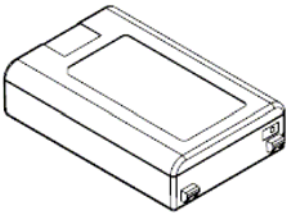
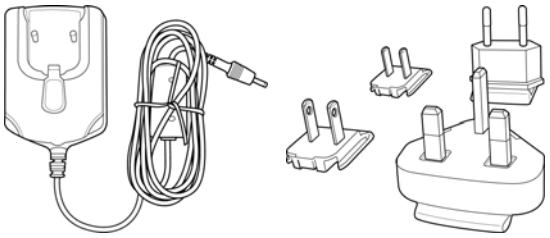
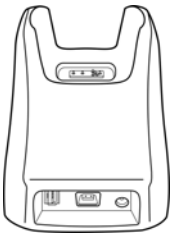
Hand Strap & Stylus

The hand strap is convenient for carrying your HT680 and also includes a stylus attachment.

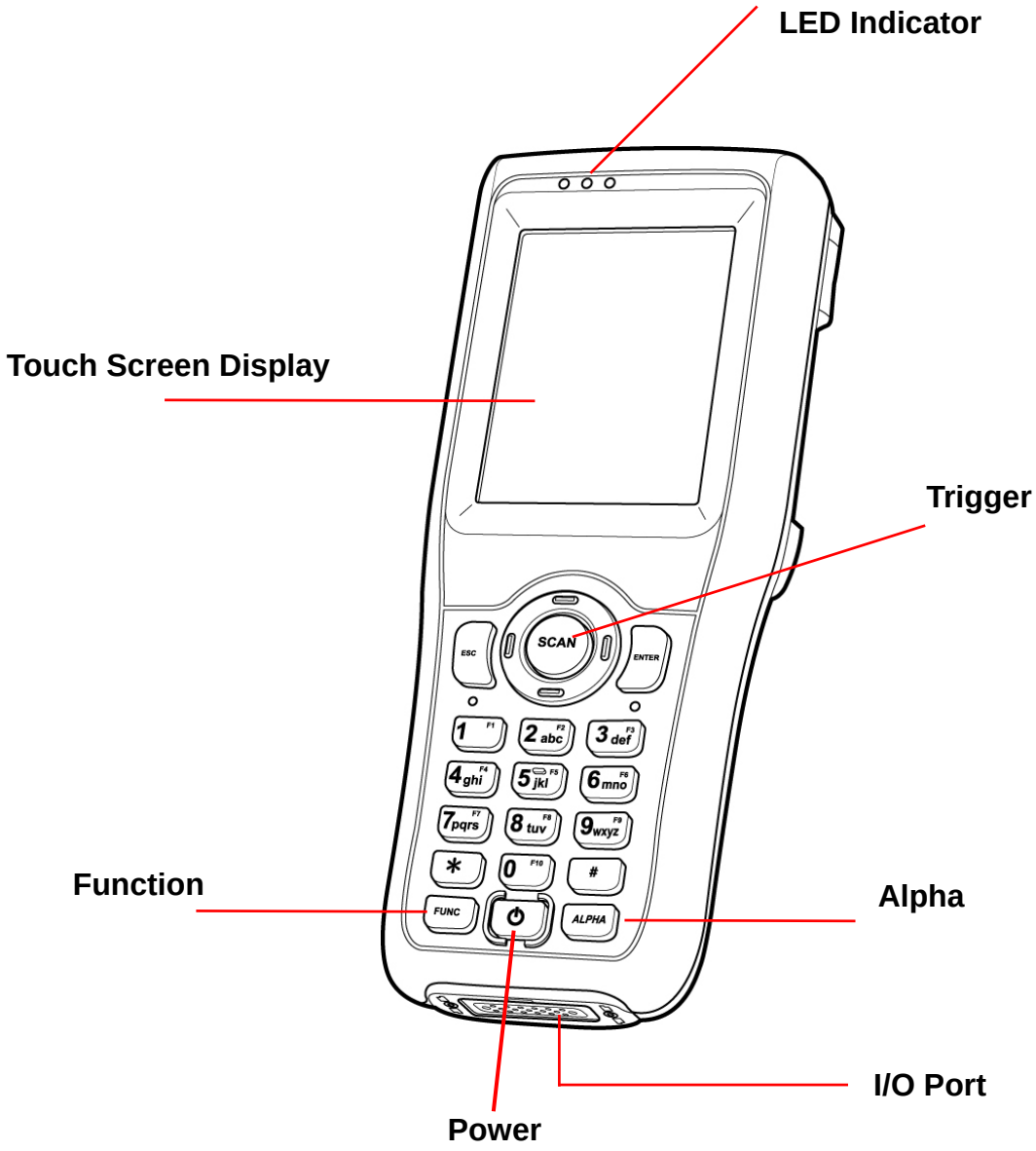
Li-ion Battery Pack

The 3.7v, 1950mAh Li-ion rechargeable battery pack provides the main power supply for HT680 terminal.

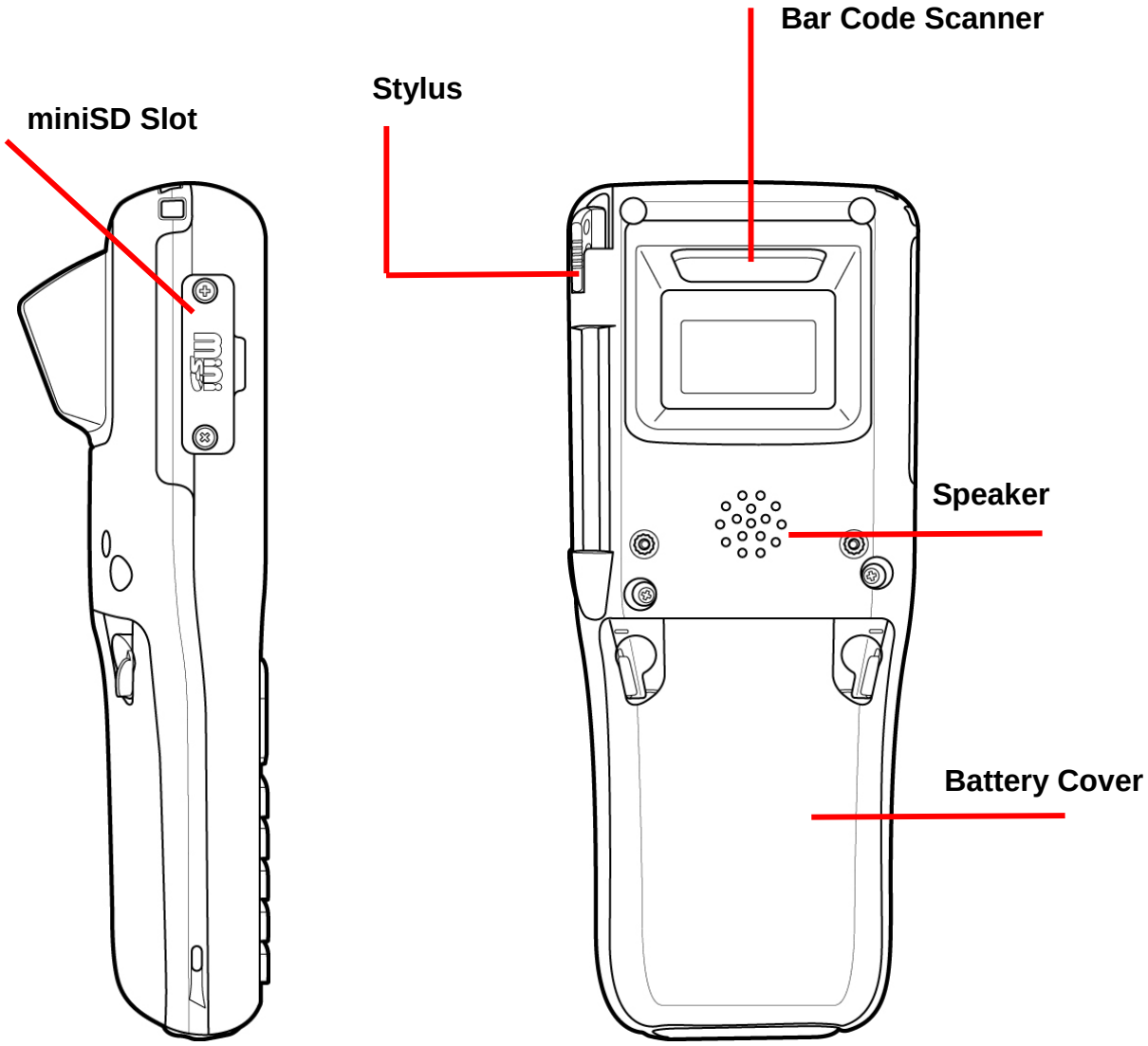
HT680 Product Introduction & Accessory Kit

HT680 Terminal	Manual CD
	
Communication Cable	Battery
	
Adaptor Plugs	Communication Cradle

HT680 Front View



HT680 Rear View



First Step with HT680

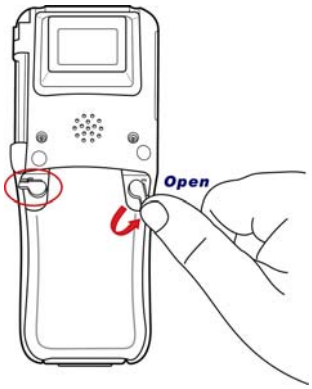
Before first using the HT680, please ensure the battery is fully charged. There are three ways to charge your HT680:

- Docking Station
- USB/Charging cable
- Rechargeable Lithium-Ion battery pack

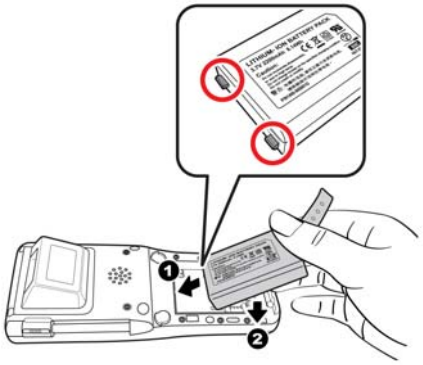
NOTE: Data loss may occur if the HT680's backup battery is not adequately charged. Before charging the main battery, make sure the backup battery switch is ON.

Install the Battery Pack

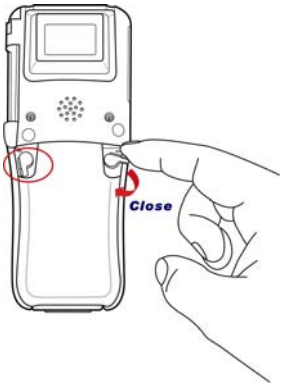
1. Remove the battery cover.



2. Move the backup battery switch to the ON position (see the description below).
3. Insert the battery pack so that the contacts on the battery pack line up with the contacts in the battery compartment. Fully seat the battery.

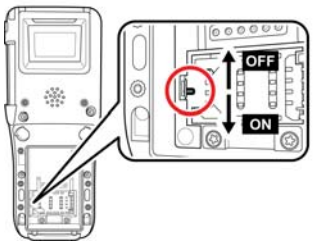


4. Cover the battery.



Switch On Backup Battery

Locate the backup battery switch inside the battery compartment on the left-hand side. Please ensure that it is in the “ON” position before charging the main battery.



Supply Power to the HT680

Connect the USB/Charging Cable to the HT680 and connect the AC adapter to the cable’s power jack and an electrical outlet.

Or place the HT680 into the Docking Station (first connect the power supply to the Docking Station).

First Time to Charge the Main Battery & Backup Battery

We would like to propose to charge the battery at least up to 16 hours for the first time to use. While it normally only takes about 4 hours to charge the battery after it's been drained, when charging the battery for the first time please allow at least 16 hours. While charging the main battery the backup battery should also be charged. Please make sure the backup battery has been switched “ON” (this cannot be emphasized enough).

CAUTION: There is a high risk of data loss from RAM if the backup battery is not fully charged. This can happen if the main battery has been drained and the unit is not connected to the AC adaptor. For this reason, it is crucial that the backup battery is switched on before charging the main battery for the first time.

Protective Screen Film

To protect screen, the HT680 has been provided with a protective plastic film. You may remove it (if required). The screen will be more susceptible to scratching without the film, but will be more readable.

First Time Use of the HT680

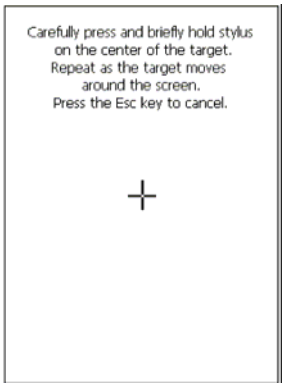
Pressing the Power ON/OFF Key

The Unitech HT680 welcome screen appears. The Windows CE screen will appear shortly thereafter.

Align the Screen

When prompted, use the stylus to tap the targets as they appear in order to align the touch screen.

When you complete the procedure, press any key or press anywhere on the touch screen to start up the WinCE system.

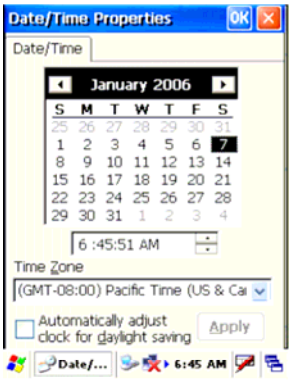

Carefully press and briefly hold stylus
on the center of the target.
Repeat as the target moves
around the screen.
Press the Esc key to cancel.

New calibration settings have
been measured.
Press the Enter key to accept
the new settings.
Press the Esc key to keep
the old settings.

Adjusting Screen Brightness

To adjust the original default setting of the screen brightness, the backlight setting will be required. Please refer to page 20 for the new setting procedure.

Setting Time Zone/ Date


Date/Time Properties
OK
Date/Time
January 2006
S M T W T F S
25 26 27 28 29 30 31
1 2 3 4 5 6 7
8 9 10 11 12 13 14
15 16 17 18 19 20 21
22 23 24 25 26 27 28
29 30 31 1 2 3 4
6 :45:51 AM
Time Zone
(GMT-08:00) Pacific Time (US & Ca
Automatically adjust clock for daylight saving
Apply
Date/...
6:45 AM

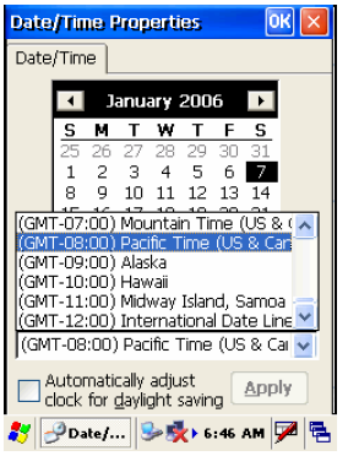
Before using the HT680 please take a few minutes to set the time and date so that data can be properly time-stamped.

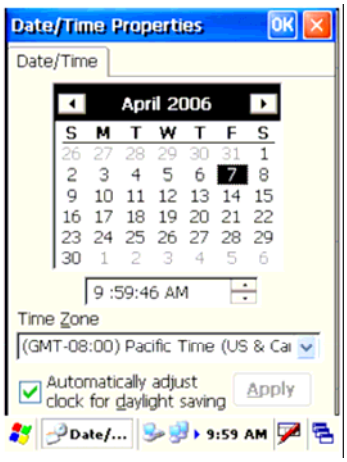
Setting the Time Zone First

Follow the steps below to set up your time zone.

1. Tap the location arrow to see a list of cities.
2. Choose your location (or nearest listed one).
3. Select the Daylight Savings Time check box, if necessary.
4. Tap the Apply button.

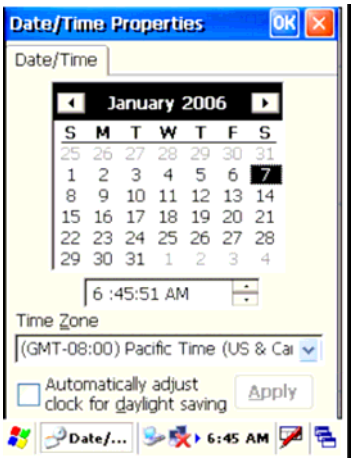
If you would like the terminal automatically adjust clock for daylight saving, please tick on it.

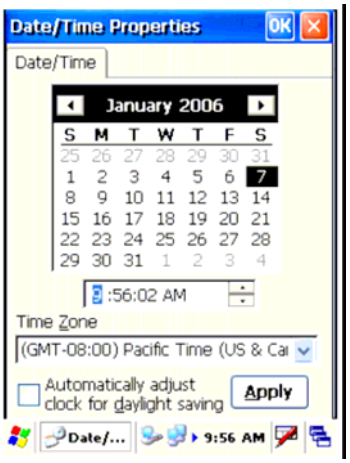



Date/Time Properties
OK
Date/Time
April 2006
S M T W T F S
26 27 28 29 30 31 1
2 3 4 5 6 7 8
9 10 11 12 13 14 15
16 17 18 19 20 21 22
23 24 25 26 27 28 29
30 1 2 3 4 5 6
9 :59:46 AM
Time Zone
(GMT-08:00) Pacific Time (US & Ca
Automatically adjust clock for daylight saving
Apply
Date/...
9:59 AM

Setting Date/Time

Tap the Left or Right arrows to scroll the year and month you desire. Or, directly tap location of year or month to change the year or month setting. To set up time, tap on the Hr/Min/Sec AM/PM to input the Hr/Min/Sec


Date/Time Properties
OK
Date/Time
January 2006
S M T W T F S
25 26 27 28 29 30 31
1 2 3 4 5 6 7
8 9 10 11 12 13 14
15 16 17 18 19 20 21
22 23 24 25 26 27 28
29 30 31 1 2 3 4
6 :45:51 AM
Time Zone
(GMT-08:00) Pacific Time (US & Ca
Automatically adjust clock for daylight saving
Apply
Date/...
6:45 AM

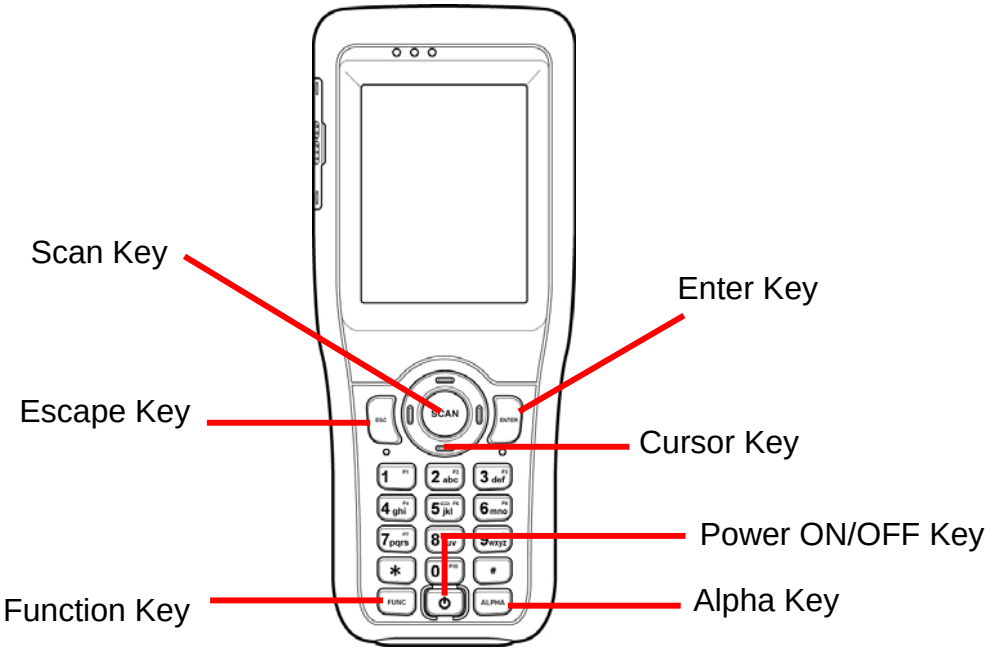

Date/Time Properties
OK
Date/Time
January 2006
S M T W T F S
25 26 27 28 29 30 31
1 2 3 4 5 6 7
8 9 10 11 12 13 14
15 16 17 18 19 20 21
22 23 24 25 26 27 28
29 30 31 1 2 3 4
9 :56:02 AM
Time Zone
(GMT-08:00) Pacific Time (US & Ca
Automatically adjust clock for daylight saving
Apply
Date/...
9:56 AM

Chapter 2

Using the Keypad and Scanner

Keypad

Data can be entered into the HT680 via its keypads, which includes: 0~9, alpha, function, escape, enter, scanner trigger, cursor, and on/off keys.



[ENT] The Enter key confirms data entry.

[FUNC] The Function Key is used in conjunction with specific number keys to operate as Hotkeys (see next page).

[ESC] The escape key returns the user to a previous page.

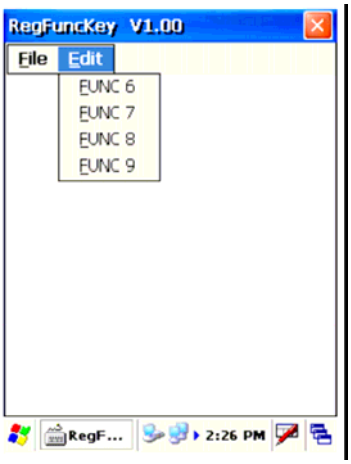
[Cursor] The cursor key moves the cursor around the screen.

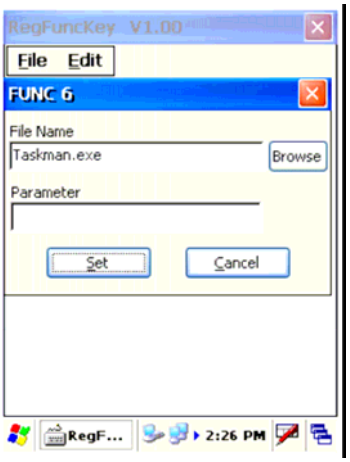
[Alpha] The Alpha key toggles Alpha mode on and off and Caps mode on and off. One press of the Alpha key causes the HT680's keys to input alpha characters, indicated by a blue LED light. A second press causes the input of upper-case characters, indicated now by a green LED. A third press returns the HT680 to numerical input.

HT680 HotKey

The HT680 provides hotkeys for frequently used functions. Press the Function key and the appropriate numeric key for the following functions listed below:
Func 6 = Task Manager
Func 7 = Scanner Setting
Func 8 = Power Properties
Func 9 = System Info

Hotkeys can be modified to suit the user's preferences. To modify hotkeys, please follow the path below:
Path: My computer/Windows/RegFuncKey.exe



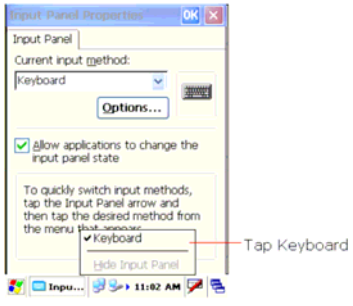


Software Keyboard (Windows CE Keyboard)

Besides its hardware keypad, the HT680 provides a touchscreen keyboard as an alternative method of character input. This software keyboard replicates the layout of a standard PC keyboard.

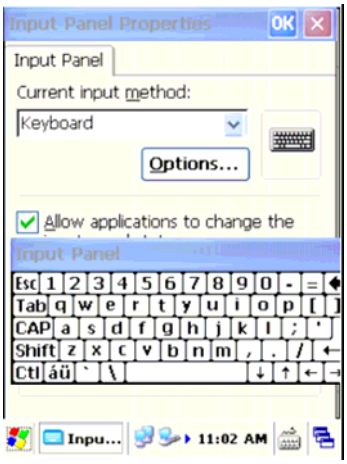
Opening the Windows CE Keyboard

The Windows CE keyboard can be opened by tapping the “keyboard” icon on the task bar. (Refer to picture).


Input Panel
Current input method:
Keyboard
Options...
Allow applications to change the input panel state
To quickly switch input methods, tap the Input Panel arrow and then tap the desired method from the menu that appears.
Keyboard
Hide Input Panel
Tap Keyboard

Other Character Support from WinCE Keyboard

In addition to standard keyboard input, the HT680 supports special European character and symbol input. To enter these characters, tap the [áü] key on the touch screen keyboard to display the available characters.


Input Panel Properties
OK
Input Panel
Current input method:
Keyboard
Options...
Allow applications to change the
Input Panel
Esc 1 2 3 4 5 6 7 8 9 0 - =
Tab q w e r t y u i o p [ ]
CAP a s d f g h j k l ; '
Shift z x c v b n m , . / ←
Ctl áü ` \ ↓ ↑ ← →
Inpu...
11:02 AM

Bar Code Scanner

The HT680 has an integrated 1D laser and 2D imager bar code scanner (depending on model number) capable of reading all major bar code labels.

Chapter 3

Power system

Charging the Lithium-Ion Battery Pack

The HT680's batteries can be charged via the USB or serial communication cable, or via the optional docking station - both using the included AC adaptor. Please charge the battery for at least 4 hours per session to ensure a full charge. Please note that the first time charge should be for at least 16 hours (see the description below).

Charging the Main and Backup Battery for the First Time

When first charging the HT680, please allow at least 16 hours to fully charge both the main and backup batteries. When the HT680 arrives from the factory the backup battery switch is in the OFF position in order to protect the backup battery. Before first charging the HT680, make sure the backup battery switch is moved to the ON position. The backup battery switch can be found inside the main battery compartment. Data loss can occur if the backup battery is not adequately charged - therefore it is imperative to ensure that the backup battery switch is in the ON position before charging for the first time.

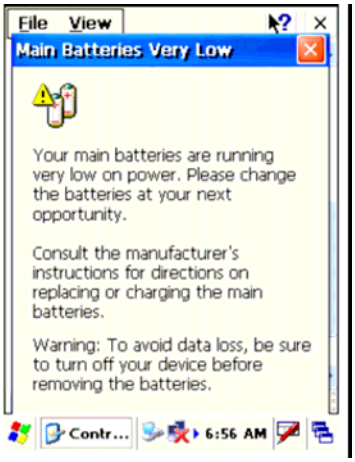
A properly charged backup battery can store data for up to 72 hours without power from the main battery. This is not recommended. Please make sure an adequately charged main battery or AC power is presented and try not to rely on the backup battery for other than unusual or emergency situations. To prevent data loss due to backup battery failure (always a slim possibility), please minimize the amount of time that the backup battery has to operate without the main battery pack installed or while disconnected from AC power.

Environment Consideration for Charging

It is important to consider the environment temperature whenever you are charging the Lithium-Ion battery pack. The process is most efficient at normal room temperature or slightly cooler. It is essential that you charge batteries within the stated range of -5°C to 50°C. Charging batteries outside of the specified range could damage the batteries and shorten their charging life cycle.

Power Status Indication

When the "Main Batteries Very Low" icon appears, charging the main battery pack as soon as possible is highly recommended in order to avoid system shutdown at an awkward moment.


File View
Main Batteries Very Low
Your main batteries are running very low on power. Please change the batteries at your next opportunity.
Consult the manufacturer's instructions for directions on replacing or charging the main batteries.
Warning: To avoid data loss, be sure to turn off your device before removing the batteries.
Contr...
6:56 AM

“Backup Battery Low” Icon

When the "Backup Battery Low" icon appears, it indicates that the backup battery is low and needs to be charged.

Charging the Lithium-Ion Battery Pack

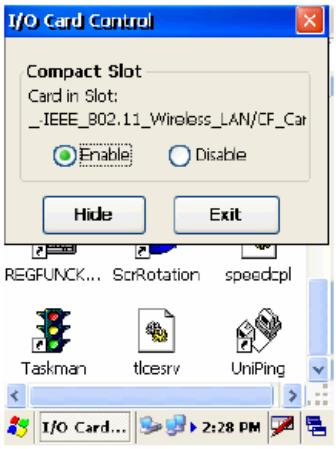
Automatic shutdown of the HT680

The HT680 will enter idle mode when there is no task, or all tasks are waiting for input. In default setting, the HT680 will automatically turn itself off if it remains idle for 3 minutes and when there is no external charging power applied. Pressing the power button will return the HT680 to the same point at the time of automatic shutdown.

Note

Suggestion 1: Turn off wireless mode if you are not using it. This will conserve battery power.

Suggestion 2: Disable the I/O card if Internet access is not required.



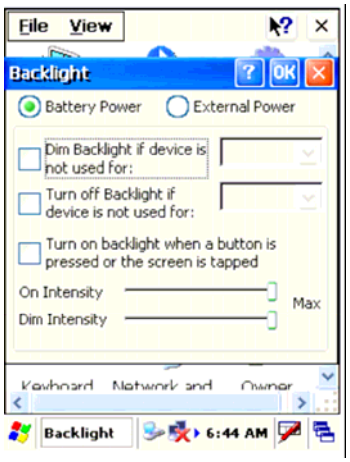
Storage and Safety Precautions

Batteries should be stored in an open environment and placed where there is no risk of accidental shorting or other damage. Although charged Li-Ion batteries may be left unused for several months, their capacity may be reduced due to back up and internal resistance. If this happens they will require recharging prior to use. Li-Ion batteries may be stored at temperatures between -4°F and 158°F (-20°C to 70°C).

Backlight Setting

The backlight for color display is user-defined. There are two tabs – one for Battery Power and the other for External Power.

Field	Description
Dim Backlight if	Select how many minutes you want to elapse before the backlight dims.
Turn Off Backlight if	Select how many minutes you want to elapse before the backlight automatically turns off.
Turn on Backlight	Select this option if you want the backlight to turn on when the button is pressed or the touch screen is tapped.



Warm Boot / Cold Boot

Warm Boot

Warm Boot is a reset to re-boot the HT680 without losing saved data. Perform a warm boot when:

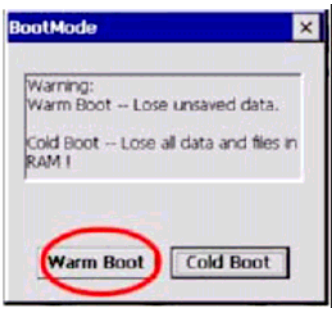
- The terminal fails to respond.
- After installing some software applications
- After making changes to certain system settings, such as network cards

WARNING - Performing a Warm Boot will result in the loss of all unsaved data!

Warm Boot via Software

To perform a Warm Boot via software, locate the file Windows/Boot.exe.

Tap “Warm Boot”. The system will be warm started.

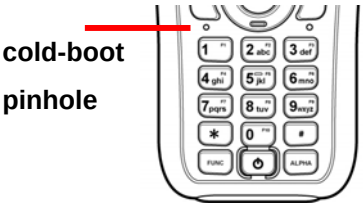


Warm Boot via Hardware

Use a blunt pin (like an unfolded paper clip) to stab the warm-boot pinhole located on the front of the HT680, above the keypad.

Cold Boot

A Cold Boot is used to reset the operating system, restore the terminal back to factory default, and reset the terminal after a bootloader, keyboard, or kernel upgrade. You are also allowed to stab the cold-boot pinhole to cold boot the HT680.

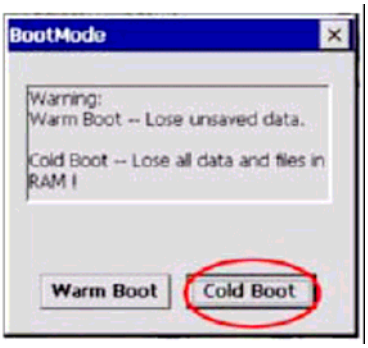


WARNING - Performing a Cold Boot will return the HT680 to its original factory settings!

Cold Boot via Software

To perform a Cold Boot via software, locate the file Windows/Boot.exe.

Tap “Cold Boot”. The system will be re-started and reset back to factory default.
You will need to recalibrate the screen and reset the date and time.



Cold Boot via Hardware

1. Remove the Main Battery.
2. Switch OFF the Backup Battery.
3. Switch the Backup Battery back ON.
4. Insert the Main Battery.
5. The terminal will be cold started and reset back to factory default.
6. Recalibrate the screen and reset the date and time.

Chapter 4

Data Communication

Introduction

The Unitech HT 660 allows users to link to a host computer via RS-232 / USB, Bluetooth, or Wireless connection for data communication.

This chapter provides an overview of the communication of the HT680. The following subchapters cover these topics:

- "Series or USB or Modem" communication via cable or docking station
- "RF Communication" for details about wireless communication between the HT680 and host computers
- "Microsoft ActiveSync" for details about serial communication via USB port

Connecting

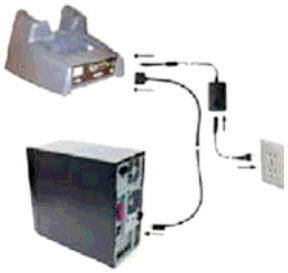
Serial or USB Cable

Plug the USB end of the HT680 communication cable into your PC's USB port, and the other end into the HT680's communication port. To simultaneously charge the HT680, plug the AC power adaptor into the power receptacle on the USB plug.

Docking Station

USB Cradle

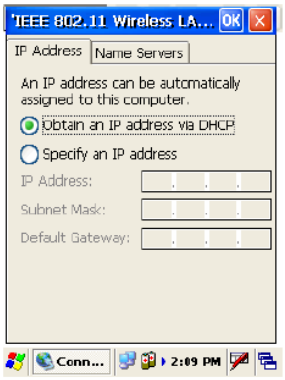
For data transmission, plug one end of your HT680's USB communication cable into your PC's USB Port and the other end into the HT680 Docking Station's USB port. To simultaneously charge the HT680, plug the AC power adaptor into the power receptacle on the Docking Station.



RF Communication

Windows CE can support TCP/IP protocol and the user can link to the Internet via the settings under " Network and Dial-up Connections".

In the Network and Dial-up Connections, go to PRISM1 to set up the IP to connect to internet.



Using ActiveSync

Using Microsoft ActiveSync, you can synchronize and transfer information between your desktop computer and terminal. The most current version of ActiveSync can be downloaded from www.microsoft.com.

Additional Capabilities

With ActiveSync, you can also:

- Back up and restore your device data.
- Copy (rather than synchronize) files between your device and desktop computer.
- Control when synchronization occurs by selecting a synchronization mode. For example, you can synchronize continually while connected to your desktop computer or only when you choose the synchronize command.
- Select which information types are synchronized and control how much data is synchronized. For example, you can choose how many weeks of

past appointments you want synchronized.

Before beginning installation, carefully read the following:

- Because you will be restarting your computer during installation, save your work and quit all programs before you begin.
- To set up your communication settings, the HT680 serial cable is required to connect the HT680 to your host computer.
- If you run the Windows NT® operating system with a service pack, you will be informed during setup that you may need to reinstall the service pack. Try connecting first, and if unsuccessful, reinstall the latest service pack.

Requirements

To synchronize, ActiveSync version 3.7 or higher must be installed on both your desktop computer and the HT680 terminal. The HT680 terminal is installed with ActiveSync and shipped. Therefore, you must install ActiveSync 3.7 on your desktop computer.

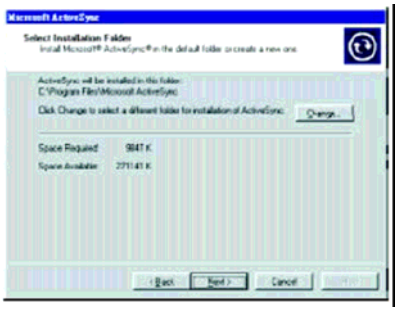
To install ActiveSync on your desktop computer, please link to Microsoft website to get free download driver.

Installation

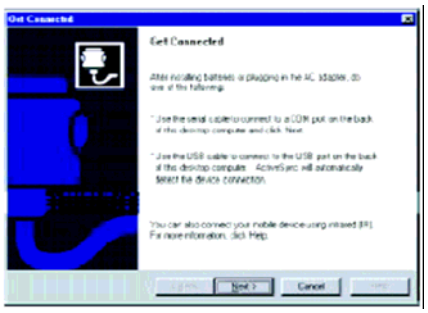
Follow the installation procedure below to install Microsoft ActiveSync, connect your HT680 to your desktop computer, and establish a partnership for synchronization, if required.

Download the executable program “msasync.exe” from the Microsoft web site at: http://www.microsoft.com/mobile/pocketpc/downloads/activesync35.asp. Execute this program.

Select the folder into which Microsoft ActiveSync will be installed. If you choose not to download into the displayed default folder, click the Change button.



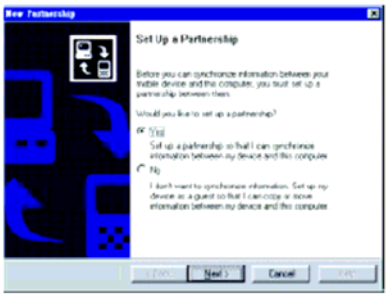
After you've selected the folder, click Next to set up Microsoft ActiveSync. After you've installed Microsoft ActiveSync and restarted your computer, you'll see the screen:



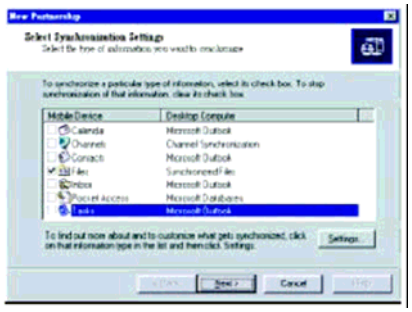
- Using the USB, plug the PA966 into a communication port on your desktop computer.
- Turn the HT680 on. Click the Next button.

Microsoft ActiveSync should recognize your HT680 and configure your communication port. If a message appears indicating that it is unable to detect a connection, click the Cancel button and manually configure the communication settings.

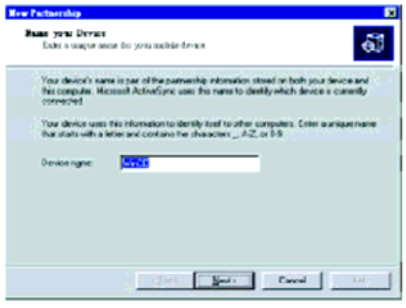
When the HT680 is initially connected to a PC, the following screen appears prompting you to set up a "Partnership". Setting up a Partnership is required if your HT680 is to be synchronized with other computers and/or terminals. Otherwise select No.



Now select synchronization settings. Currently the HT680 can support "Synchronized Files".

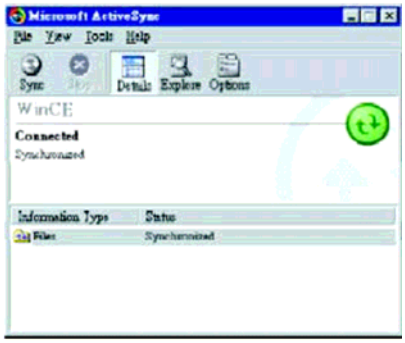


Different HT680 cannot share the same Device Name if more than one terminal is to be connected to the same PC via a "Partnership". The default Device Name assigned to the HT680 is "WinCE". It is important to specify a different name for each terminal if more than one terminal is to be connected to the same PC. When ActiveSync displays the following screen, assign each terminal its own unique name.



Click the Next button and follow the instructions to set up a partnership between the HT680 and your desktop computer. This partnership allows you to synchronize information between the two computers.

When the configuration process is complete, you'll see the screen.

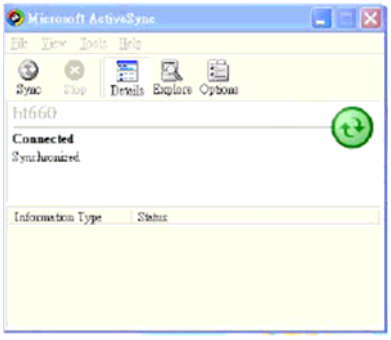


Synchronization will be initialized and will take place if you've chosen to synchronize periodically or upon connection.

Note: Your desktop computer can create a partnership with multiple HT680. Also, The HT680 can create a partnership with up to two desktop computers.

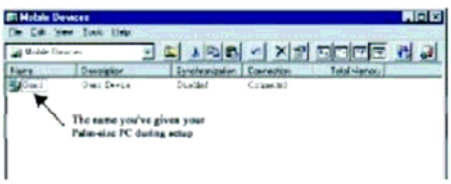
Using the Mobile Devices Window

Start Microsoft ActiveSync by clicking the Microsoft ActiveSync shortcut on your desktop and then clicking the "Explore" icon.

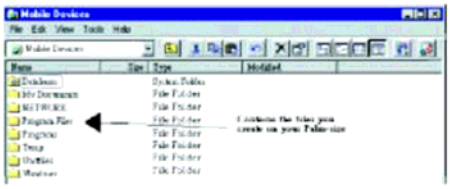


In the displayed window, you can:

Select your HT680 to use Microsoft ActiveSync features such as changing synchronization options, as described in the "Synchronization" section.



Open the Explorer window by double Clicking your device icon in the Mobile Devices window.



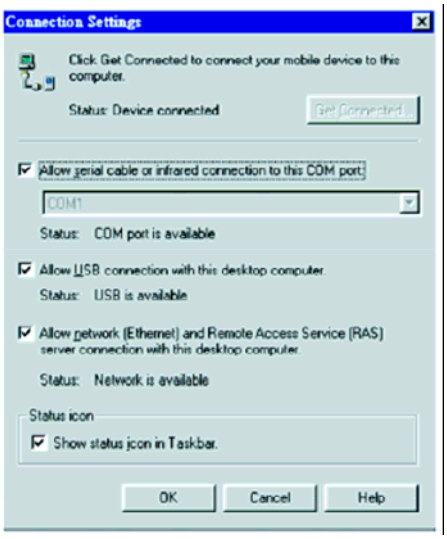
Use this window, which is the root window to the HT680, to copy and move files between the HT680 and your desktop computer, as described in the “Synchronization” section.

Changing Communications Settings

If Microsoft ActiveSync fails to detect the HT680 during installation, set up communications manually instead. Make sure the following conditions are met:

- Verify that the correct communications port is selected for your desktop computer and that it is free.
- Microsoft ActiveSync uses the specified communication ports to connect to the HT680. Make sure these resources are available for Microsoft ActiveSync to connect to the HT680. Other programs cannot use them while the HT680 and your desktop computer are connected.
- Set your baud rate on the HT680 - the desktop computer will match it.

To check communications settings, open the Mobile Devices folder, and click File / Connection Settings. The connection on the HT680 is set to USB connection by default. To adjust the connection, tap Start, Settings, Control Panel, select the Communication icon, select the PC Connection tab, and then tap the Change Connection… button.


Connection Settings
Click Get Connected to connect your mobile device to this computer.
Status: Device connected
Get Connected
Allow serial cable or infrared connection to this COM port
COM1
Status: COM port is available
Allow USB connection with this desktop computer
Status: USB is available
Allow network (Ethernet) and Remote Access Service (RAS) server connection with this desktop computer
Status: Network is available
Status icon
Show status icon in Taskbar
OK
Cancel
Help

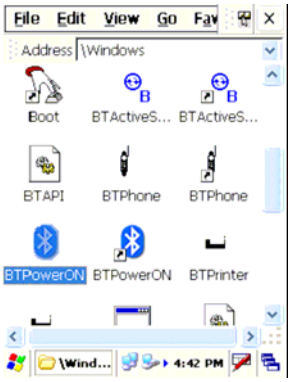
For more information see Microsoft ActiveSync Help.

Wireless Communication

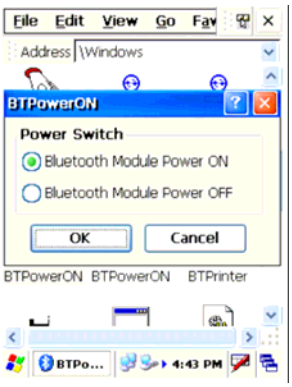
Your HT680 is equipped with built-in Bluetooth for wireless communication.

Bluetooth Setup

Select the BTPowerON program from Wireless Connection on your HT680's Startup Bar/ Program/ Bluetooth

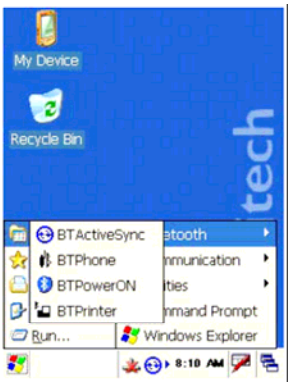


Select Bluetooth Module Power On and tap OK.

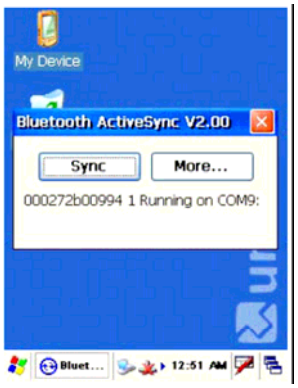


Bluetooth ActiveSync

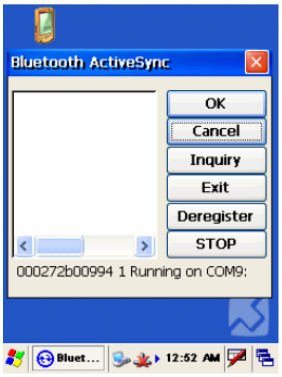
Select BTActiveSync from Communication on the Startup bar.



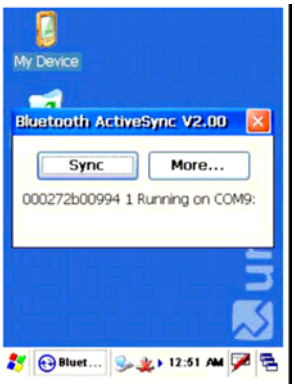
On your PC, tap the Bluetooth icon on the task bar. The screen to the right will appear. Select More...



Choose Inquiry. The inquiry process might take a few seconds. Then select the device to synchronize and tap OK.

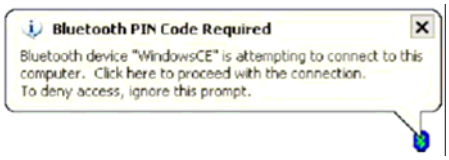


Tap the Bluetooth icon on the task bar again. Click Sync.



The message “Connecting to Bluetooth” will appear on your HT680.

A Bluetooth security screen will appear prompting you to enter a PIN code. This PIN code can be any series of letters and numbers, and must be the same code you enter on your HT680 when prompted.


Bluetooth PIN Code Required
Bluetooth device "WindowsCE" is attempting to connect to this computer. Click here to proceed with the connection.
To deny access, ignore this prompt.

When prompted by your HT680, enter the same PIN code that you’d entered on your PC. Once it is successfully entered, your synchronization is complete.

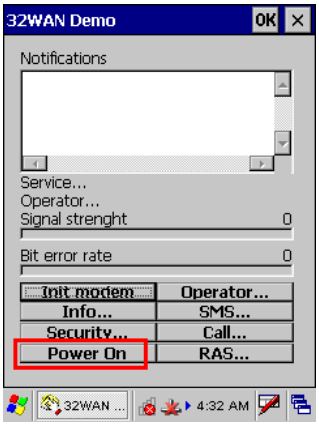
GPRS Connection

Before GPRS connection, insert a SIM card into your terminal first.

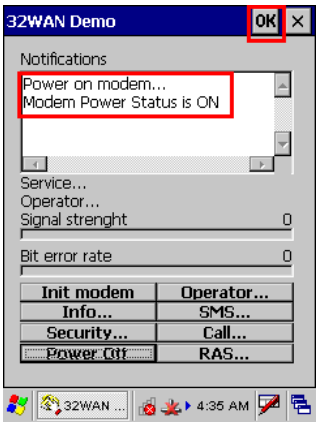
NOTE: Please turn off the SIM card lock if your SIM card is password protected.

1. Tap **Start** → **Programs** → **GPRS** → **32WANDEMO**.

2. Tap **Power On**.

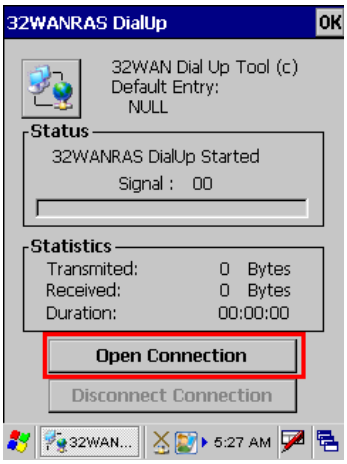


3. The screen displays “Modem Power Status is ON”. Tap **OK**.



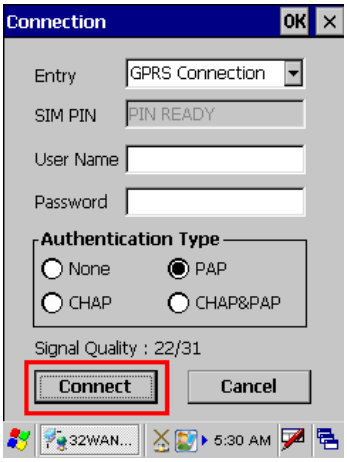
4. Tap **Start** → **Programs** → **GPRS** → **32WANRAS**.

   The 32WANRAS DialUp window appears. Tap **Open Connection**.



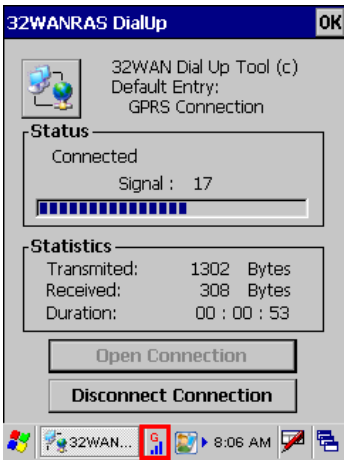
5. The **Connection** window appears. Tap **Connect**.

   For the detailed settings, please consult your local telecom company.



6. The GPRS icon on the taskbar indicating the signal strength.

   Tap **Disconnect Connection**, you can end the GPRS connection.



WiFi Connection

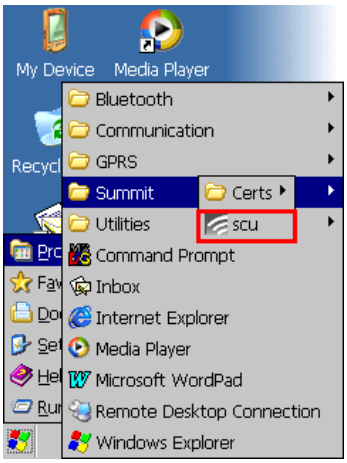
Unitech terminals come with built-in RF facility. A wireless network can be added either when the network access point is detected or by manually entering setting data. Before following these instructions, make sure if authentication information is needed.

Using the Summit Utility

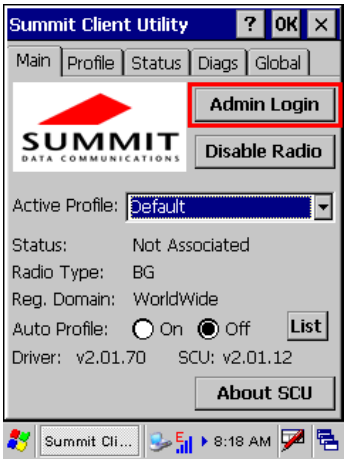
You can use the Summit Client Utility tool to do or change the WiFi settings.

Admin Login

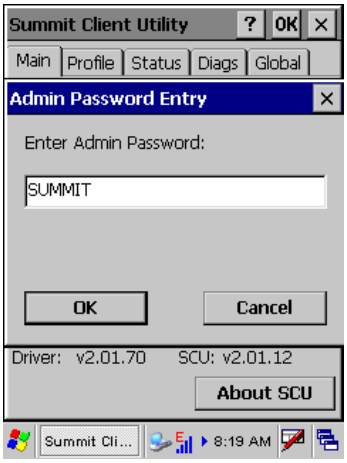
1. Tap **Start** → **Programs** → **SUMMIT** → **scu**.



2. To login as an administrator, tap **Admin Login**.

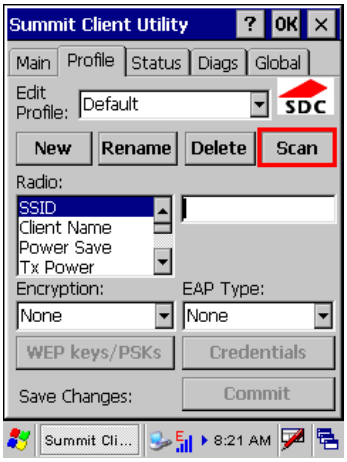


3. Enter the Admin Password. (Default pass-word: SUMMIT

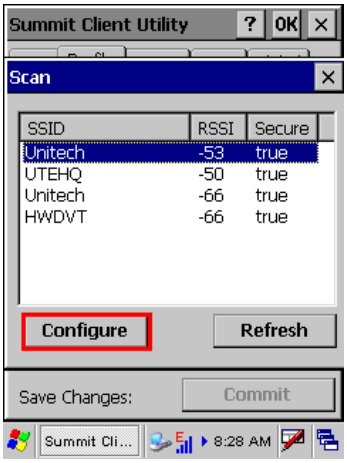


Scan Available AP

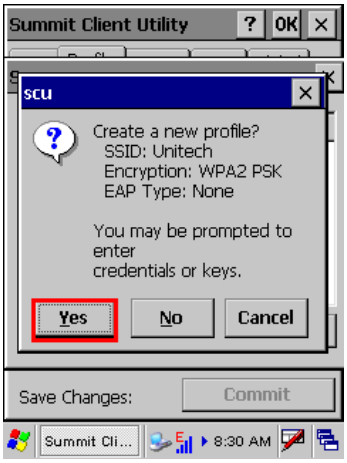
1. Under **Profil**e tab, tap Scan for available AP.



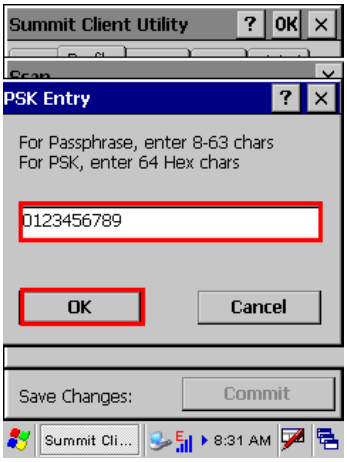
2. You may select a desired AP to create a new profile. Tap **Configure**.



3. Tap **Yes** to create the new profile.

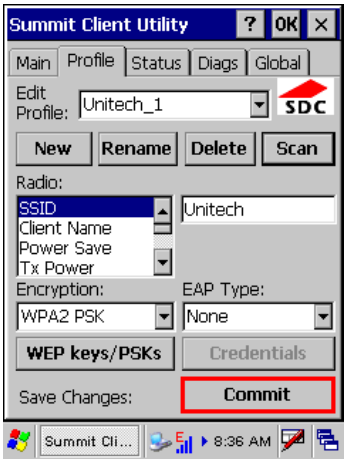


4. Enter the WEP key or network key. Tap **OK**.

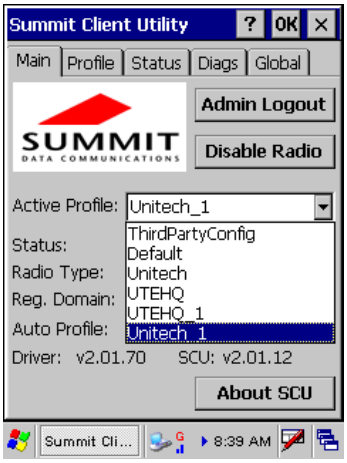


Commit and Activate

1. Tap **Commit** to activate the setting.



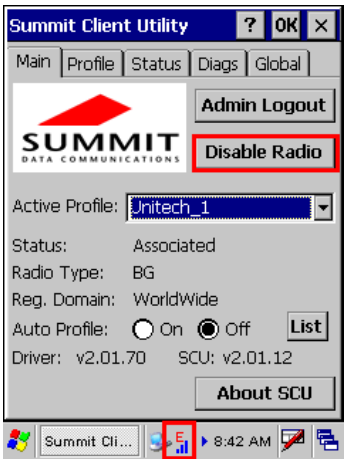
2. Under **Main** tab, select the profile you want to activate.



3. A pop-up window appears **"***A Power Cycle is required to make settings activate properly.*" Tap **OK**, and then tap **OK** to exit the Summit Client Utility.
4. Tap **Start** → **Programs** → **Utilities** → **Boot-Mode**. Tap **Warm Boot** to warm start the terminal and load the previous settings.
5. The Summit icon on the taskbar indicating the AP is connected.

   Double tap this icon to bring up Summit Control Utility. Tap **Disable Radio**, you can disconnect the AP.

   Under **Status** tab, you can see the IP address, signal strength and quality.

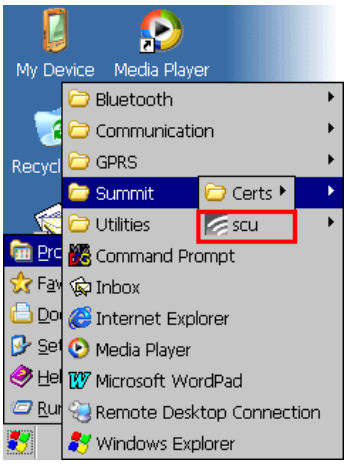


If you want to learn more detailed settings of the SUMMIT utility, please visite SUMMIT website (http://www.summitdatacom.com/documentation.htm).

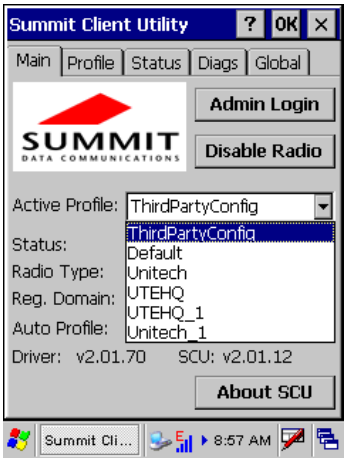
Using the Microsoft Wireless Networking Tool

Alternatively, you may use the built-in Microsoft wireless networking tool to connect to an access point.

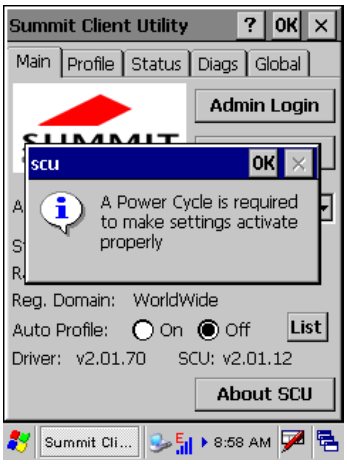
1. Tap **Start** → **Programs** → **Summit** → **scu**.



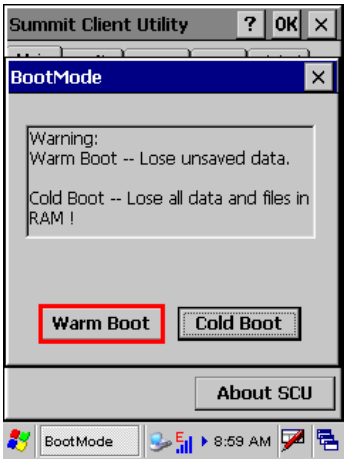
2. The Summit Client Utility window appears. Select **Third Party Config** from the drop down menu of **Active Profile**.



3. A pop-up window appears "*A Power Cycle is required to make settings activate properly.*" Tap **OK**, and then tap **OK** to exit the Summit Client Utility.

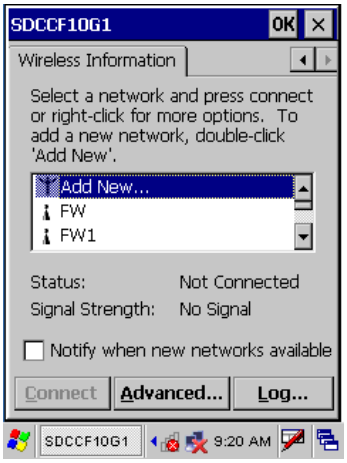


4. Tap **Start** → **Programs** → **Utilities** → **Boot-Mode**. Tap Warm Boot to warm start the terminal and load the previous settings.

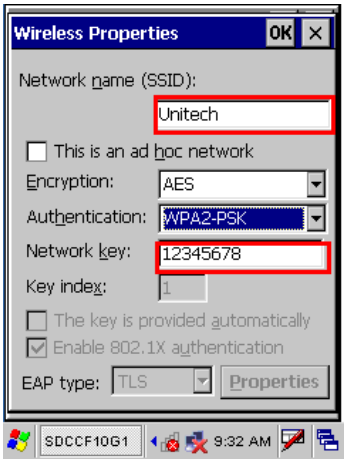


5. Tap the wireless network icon as a shortcut on the desktop.

6. Tap **Add New** or double tap a preferred network.



7. Enter a Network Name (SSID) and a Network Key. For the detailed instruction on wireless network encryption setting, please visit Microsoft website.



8. The network icon appears on the taskbar when the RF is connected.

Chapter 5

Useful Utilities

Introduction

Unitech has been developing some of useful utilities for user's application. The followings are Unitech Utilities introduction.

Scanner Setting

When it is necessary for the user to change the default barcode symbology for a different application, Scanner Control Panel provides the setting function to change default symbology, place delimiter characters behind scanned data, and save the settings. Run this program from \Start\Setting\Control Panel\Scanner Setting.exe and Scanner Control Panel will be displayed.

Barcode Symbologies

Barcode Symbology	Enable/ Disable	Char Check / Digit verification	Transmit Check Char/digit	Max/Min Length	Leading Digit Transmit	Others
Bookland EAN	YES					
Codabar	YES	YES	YES			Transmit Start/Stop bits, CLSI format, *data length
Code 11	YES		YES			* check digits, *data length
Code 128	YES					*data length
Code 32	YES					Transmit Tailing

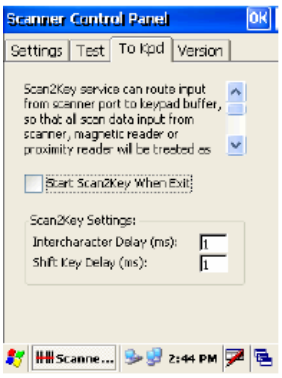
Barcode Symbology	Enable/ Disable	Char Check / Digit verification	Transmit Check Char/digit	Max/Min Length	Leading Digit Transmit	Others
						digit
Code 39	YES	YES				For ASCII, Transmit Start/Stop bits, Function Code, Double label decoding,*data length, *double labels separator
Code 93	YES		YES			*data length
Deta Code	YES	YES	YES			
EAN 128	YES		YES			Transmit Code ID, * Field separator
EAN 13	YES	YES				
EAN 8	YES	YES				* Not suppress first or last digit, *data length
Interleaved 2 of 5	YES	YES	YES			Fixed Length, * Not suppress first or last digit, *data length
Label Code IV&V	YES		YES			
MSI/Plessey	YES		YES			* Check digit double module 10, * data length
Interleaved 2 of 5	YES	YES	YES			Fixed Length, *Data Length
Telepen	YES					*Standard Character Set

Barcode Symbology	Enable/ Disable	Char Check / Digit verification	Transmit Check Char/digit	Max/Min Length	Leading Digit Transmit	Others
UPC A	YES		YES		YES	
UPC E	YES		YES		YES	Zero Expension,NSC
UPC/EAN Group						Supplement 2, Supplement 5,Insert Space before supplement, most have supplement, *Add-on code try level

Note: *Value Adjustable Scanner Control Pannel V3.0

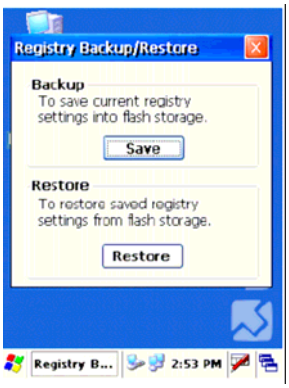
Scan2Key

The Scan2Key application can route input from the scanner port to the keyboard buffer, with the result that all scanned data will be treated as if they were input from the keypad. With this router, scanned data can be directly input into generic applications like MS Pocket Word. Scan2Key can be found at: \Start\Setting\Control Panel\Scanner Setting\ To kpd.


Scanner Control Panel
OK
Settings
Test
To Kpd
Version
Scan2Key service can route input from scanner port to keypad buffer, so that all scan data input from scanner, magnetic reader or proximity reader will be treated as
Start Scan2Key When Exit
Scan2Key Settings:
Intercharacter Delay (ms):
Shift Key Delay (ms):
Scanne...
2:44 PM

Registry Backup/Restore

The Registry Backup program stores the HT680's registry settings for the user to access. If a cold boot should be required, or the user otherwise wants to return the registry to a previous state, the user can retrieve an earlier setting from Registry Backup.

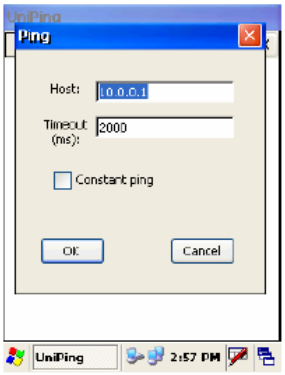


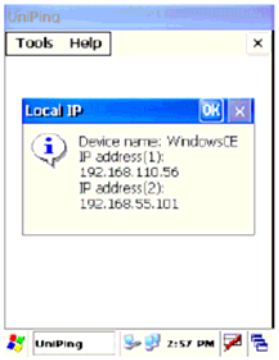
Registry Restore allows the user to restore the HT680s registry to a previously saved version.

\Start\Program\Utilities\Registry Backup

UniPing

This Unitech program enables the user to ping their IP to determine the status of the connection.





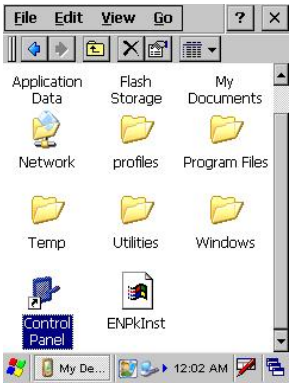
Chapter 6

Device Setting

Introduction

The Device Setting is a short cut for you to view device information and do settings, such as Function Key, I/O, Server and so on. The following description will guide you through completion of all device-setting items.

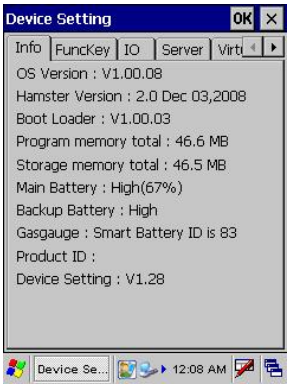
1. Left click Control Panel in My Device.



2. Double click Device Setting.

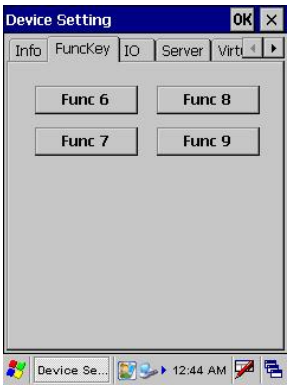
Info

Info tab shows general information of this terminal such as OS version, memory space, battery power, product ID and etc.

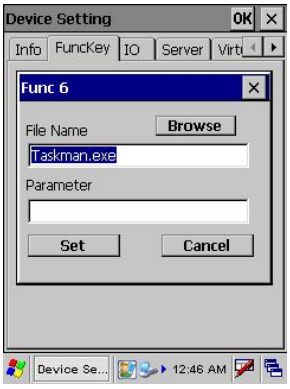


Funckey

1. Tap “FuncKey” tab. Four hot keys can be changed by the users.



2. Tap “Func6”. Tap “Browse” to select a file. Tap “Set”.



3. Press “Func” key and “6” key. Func6 will call the application that the users specified.
4. You can repeat the steps for Func7, Func8, and Func9.

   By default:

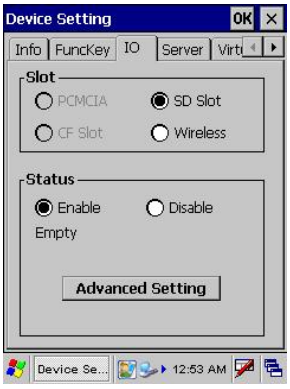
   Func6 – Task Manager

   Func7 – Scanner Settings

   Func8 – Power Properties

IO

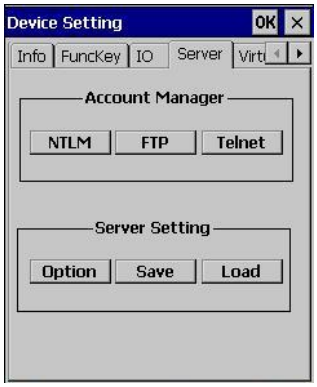
1. Tap “IO” tab.



2. Under status, select “Enable” or “Disable”.
3. When enable, SD/ Wireless card is always accessible; when disabled, SD/Wireless card is not accessible.

Server

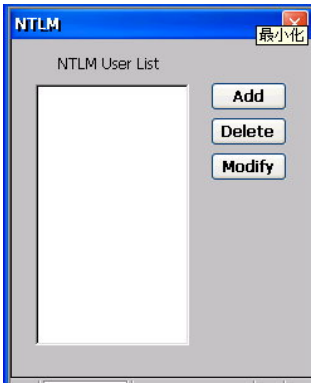
Server Manager is a tool for the user to manager the NTLM (Windows NT LAN Manager) users, FTP users and telnet users.



Account Manager

NTLM

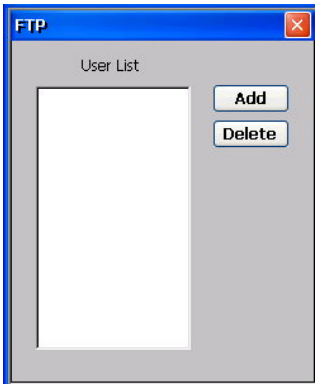
1. Tap “Server” tab.
2. Tap “NTLM”. Tap “Add” to add a new user.



3. Key in the user name and password. Tap OK.
4. To modify a user's password, select the user and tap "Modify".
5. Enter the new password and confirm password. Tap OK.
6. To delete a user, select the user you want to delete, tap "Delete".

FTP

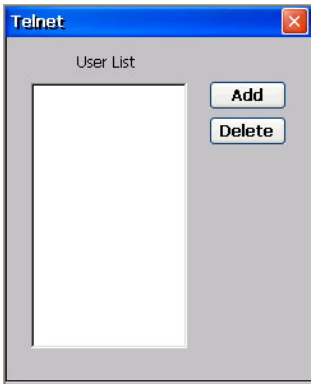
1. Under "FTP" tab, tap "Add" to add FTP user.



2. Select the user and tap "Add".
3. To delete ftp user, select the user and tap "Delete". You will see the dialog box – "*Do you want to delete the user X?*" Tap "Yes".

Telnet

1. Under "Telnet" tab, tap "Add". Add the telnet user from NTLM.
2. Select the user and tap "Add".

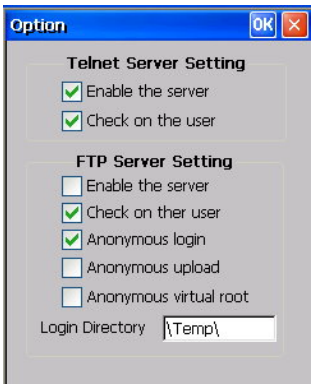


3. To delete telnet user, select the user and tap "Delete". You will see the dialog box – "*Do you want to delete the user X?*" Tap "Yes".

Server Settings

Option

1. Tap “Option”.



For telnet server setting, enable/disable server.

2. For FTP server setting, enable/disable server and define anonymous login.

Save

Tap “Save” to save the server settings.

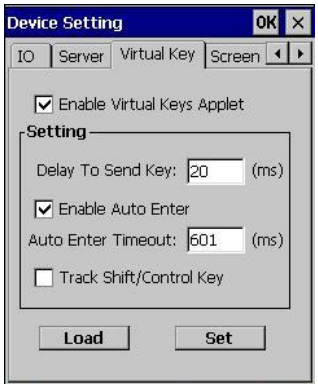
Load

Tap “Load” to load the saved server settings.

Virtual Key

This tool allows you to enable/disable the alpha keys on the terminal’s keypad, set auto enter and inter character delay.

1. Tap “Virtual Key tab.

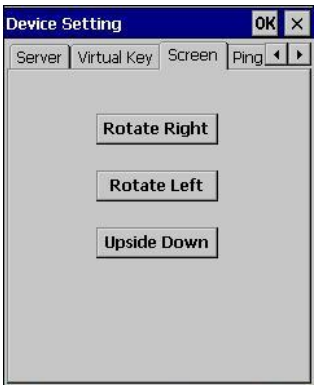


2. Check “Enable Virtual Keys Applet”. Tap “Set”. Tap OK.
3. Open MS WordPad and test alpha keys. Press “alpha” key and press numeric key. The characters output as alpha keys.
4. Uncheck “Enable Virtual Keys Applet”. Tap “Set”. Tap OK.

5. Press “alpha” key and press numeric key. The characters output as non-alpha keys.
6. In “Virtual keys”, enter the time delay for “Delay To Send Key”. Characters will be output in the speed as defined.
7. In “Virtual keys”, check “Enable Auto Enter”.
8. Define a value for “Auto Enter Timeout”. Tap “Set”. Tap OK.
9. In MS WordPad, turn to alpha mode. Press and hold a key. The alpha characters are highlighted in a loop. Release the key. The character, which was focused on will be printed after a period of time, according to the auto enter timeout defined.
10. Tap “Load” to load the previous setting.

Screen

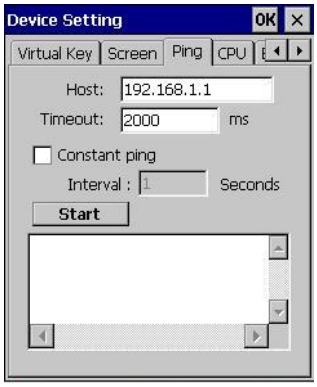
1. Tap Rotate Right. Screen rotates to the right.
2. Tap Rotate Left. Screen rotates to the left.
3. Tap Upside Down. Screen rotates upside down.



Ping

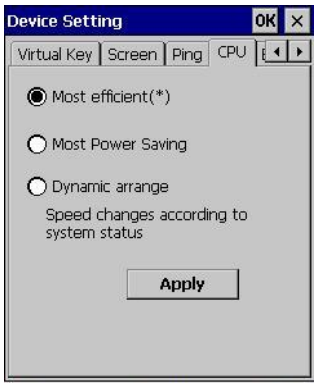
This tool allows you to ping to other devices in LAN network while your terminal is connected to the network.

1. Tap “Ping” tab, on Host field, enter the IP address of the device you want to ping to.
2. Check “Constant Ping” so that your terminal will continuously ping to the remote device.
3. Tap “Start”. The terminal will search for the remote computer with the IP address, which you entered. If not found, you will see “Request Time Out”. If the remote computer is found, you will see “Host Responding”.



CPU

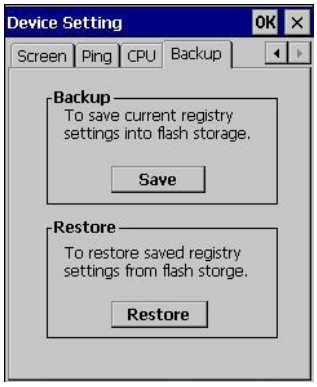
This allows you to select the speed of the CPU according to your requirement of the performance.



1. Select “Most Efficient”. This will speed up the CPU but very power consuming.
2. Select “Most Power Saving”. This will save the battery power but the efficiency is lower.
3. Select “Dynamic arrange”. This will let the speed changes according to the system status.
4. For every selection, please tap “Apply” button to take the effect.

Backup

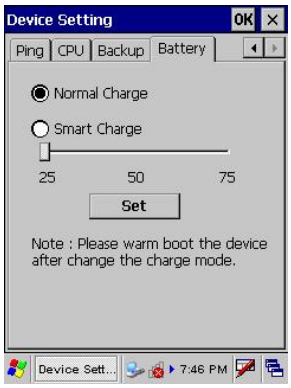
This tool allows you to save the current registry or reset to factory default.



1. Tap “Backup” tab.
2. Tap “Save” to save current registry settings.
3. Or tap “Restore” to reset registry to factory default. The terminal will be warm started. (Note that “Restore” button is grey out if the registry setting was not saved before.)

Battery

This tool allows you to charge the battery in the Small Charge mode as soon as the power of battery decreases to a level to which you drag. After changing the charge mode, you are required to warm boot the device. Whenever you charge the battery in the Small Charge mode, turn ON the device. The default charge mode is Normal Charge.



Appendix

Worldwide Support

Unitech's professional support team is available to quickly answer questions or technical-related issues. Should an equipment problem occur, please contact the nearest Unitech regional service representative. For complete contact information please visit the Web sites listed below:

Region	Web Site
Global Operation Center	www.unitech-adc.com
Unitech Asia Pacific & Middle East	www.unitech-utp.com.tw
Greater China Division	www.unitech-sbd.com
Unitech Japan	www.unitech-japan.co.jp
Unitech America	www.ute.com
Unitech Latin America	www.latin.ute.com
Unitech Europe	www.unitech-europe.nl